

In response to U.S. EPA's comments on a draft version of this Lead SIP, additional site specific contingency measures for each of the two large lead acid battery recycling facilities are described below.

Exide:

The preamble to the Lead NAAQS final rule (73 FR 67040), specifies that the SIP should contain trigger mechanisms for the contingency measures, must be implemented without further action by the state or the Administrator, and specify a schedule for implementation.

A Compliance Plan already submitted by Exide and approved by AQMD under Rule 1420.1 provisions provides specific measures to be taken if Rule 1420.1 ambient limits are exceeded. The Compliance plan states that as of March 31, 2012, if monitored ambient lead concentrations exceed $0.15 \mu\text{g}/\text{m}^3$ on a rolling 30 day average at any AQMD or AQMD-approved ambient monitor, Exide shall implement mitigation measures individually or in any combination based on the specific situation and information available at the time. These specific mitigation measures are as follows:

1. Install an additional room ventilation baghouse or dust collector, equipped with a second stage high efficiency particulate air (HEPA) filter, with sufficient blower capacity to move a minimum of 50,000 CFM of air from one or more of the following locations:
 - The battery crusher room in the north end of the RMPS building.
 - The truck loading and unloading dock on the south end of the RMPS building.
 - The furnace room in the smelter building.
 - The cupola feed room in the south end of the smelter building.

As an alternative to adding additional ventilation with individual baghouses or dust collectors, Exide may install a single larger air pollution control system with at least 200,000 CFM of blower capacity to cover all four of these locations.

2. Install second stage HEPA filters on one or more of the following air pollution control systems:
 - The hard lead refinery baghouse (device C47).
 - The soft lead refinery baghouse (device C46).
 - The MAC baghouses venting the RMPS building (devices C156, C157).
 - The cupola furnace feed room baghouse (device C48).

These measures identified in Exide's Compliance Plan are now included in the Title V permit for the facility. These measures are in addition to measures identified in and required by Rule 1420.1. The trigger mechanism is a monitored ambient lead concentration exceeding $0.15 \mu\text{g}/\text{m}^3$ on a rolling 30 day average, which will necessarily occur before a three-month NAAQS exceedance. The specific implementation schedule will depend on the situation, but will be no more than twelve months from the date of the NAAQS exceedance. Therefore, the contents of this approved, enforceable Compliance Plan meet all the requirements as a contingency measure for the Exide facility.

Quemetco:

The EPA allows states to meet contingency requirements with control measures that have already been implemented but are not needed for attainment. The contingency measures

should also consist of control measures that are not already included in the control strategy for the attainment demonstration of the SIP. The SIP must indicate that the measures will be implemented without further action (or only minimal action) by the state or by the Administrator.

Quemetco has designed, constructed, source tested, and now operates a wet electrostatic precipitator (WESP) to control particulate and metal emissions such as lead. The WESP technology serves as a secondary control device to capture low concentrations of specific contaminants present in the gas stream as condensable particulates.

WESPs are considered to be an excellent control technology for target compounds such as arsenic and lead. Arsenic is expected to be greatly reduced in the scrubber section of the WESP, while the other particulate metals compounds can be removed in the electrode collection section. Generally, WESPs are regarded as particulate removal devices. If properly designed, it can provide an overall capture efficiency of up to 99.98% for lead.

At Quemetco, an “upflow” WESP design was selected. With upflow design, inlet gas from the kiln, reverberatory furnace, electric arc furnace, and refinery flows through the primary particulate control equipment (compliant with Rule 1420.1 requirements), and then into the bottom of the WESP. Initial treatment is performed in the scrubber section at the lower part of the WESP. The scrubber section contains a packed bed condenser/absorber. In this section, SO₂ is removed from the gas stream through the use of a low-concentration sodium carbonate solution as the scrubber liquid. For particulate metals control, the main purpose of the scrubber section is to ensure that the flow of inlet gas is saturated and evenly distributed as it moves to the collection section above. A liquid cooling circuit consisting of a cooling tower and a plate-and-frame heat exchanger cools the gas and condenses the water vapor. A blowdown stream is taken from the scrubber section recirculation line to bleed sulfate reaction products and condensed water from the system. The blowdown is used as make-up water for other scrubbing processes in the plant.

Gas cooling in the scrubber section offers a number of advantages. Of these, the most important is water condensing on the sub-micron particulate metals. This results in increased particle size and higher collection efficiencies in the collection section. The gas volume is also reduced, allowing the collection section to be smaller than would otherwise be needed. Finally, gas cooling in the scrubber section ensures the greatest possible capture of condensable compounds such as arsenic from the gas stream prior to entering the collection section.

After passing through the scrubber section, the gas enters the collection section, which is made up of an array of tubes with a high-voltage electrode running through the center of each. Particulate metals collection in this area involves three steps. Initially the particles are given a negative charge by an ionizing corona produced by the electrode. Next the electrical field between the electrode and the tube wall causes the charged particles to migrate to and accumulate on the tube walls. Finally, accumulated particulate is periodically washed from the tube walls into a discharge basin at the bottom of the WESP. As the treated exhaust exits the collection section, it passes through a mist eliminator for water droplet removal prior to discharge through a stack.

The WESP is included in the Title V permit for the facility, and after more than three years of continuous operation, and several rounds of extensive testing, it has demonstrated a

substantial reduction in emissions of lead. This control technology is not required by Rule 1420.1. It has already been implemented and is more stringent than Rule 1420.1 and RACM requirements. The emissions reductions provided by this device are not needed for or included in the control strategy to demonstrate attainment for this facility as presented in Chapter 5. Therefore, it meets all the requirements necessary as a contingency measure for the Quemetco facility.

Satisfaction of Contingency Requirements: According to the preamble to the Lead NAAQS final rule (73 FR 67040), the key requirements associated with contingency measures are:

- Contingency measures must be fully adopted rules or control measures that are ready to be implemented as expeditiously as practicable upon a determination by EPA that the area has failed to achieve, or maintain reasonable further progress, or attain the lead NAAQS by the applicable statutory attainment date.
- The SIP should contain trigger mechanisms for the contingency measures and specify a schedule for implementation.
- The SIP must indicate that the measures will be implemented without further action (or only minimal action) by the state or by the Administrator.
- The contingency measures should also consist of control measures for the area that are not already included in the control strategy for the attainment demonstration of the SIP.
- The measures should provide for emission reductions that are at least equivalent to one year's worth of reductions needed for the area to meet the requirements of RFP, based on linear progress towards achieving the overall level of reductions needed to demonstrate attainment.

All of these key requirements are satisfied by the provisions of adopted AQMD Rule 1420.1 and the other compliance and permit mechanisms listed above.

The rule is fully adopted, and the Compliance Plan provision serves as a contingency measure that will *already be* implemented before a determination of failure to meet RFP or the attainment date. Rule 1420.1 contains specific trigger mechanisms more stringent than the NAAQS, with specific contingency control measures to be included in a targeted, facility-specific Compliance Plan. Implementation of the contingency measures in the approved Compliance Plan is triggered automatically without further action by the state or the Administrator. The approval of the Compliance Plan will necessarily occur months *before* EPA can provide notification of the need to implement contingency measures. Therefore, the Compliance Plan approval process is not subject to the minimal action requirement, although it still meets the EPA interpretation of this requirement, i.e. that no further *rulemaking actions* by the state, or EPA, would be needed to implement the contingency measures (73 FR 67039). The contingency measures in the Compliance Plan are not already included in the SIP or Rule 1420.1; they are additional, targeted measures to control lead emissions from unanticipated problems not already covered by the rule. The more stringent ambient monitoring requirements under rule 1420.1 are an additional contingency measure that leads to more than one year's worth of reductions based on observed ambient air concentrations.

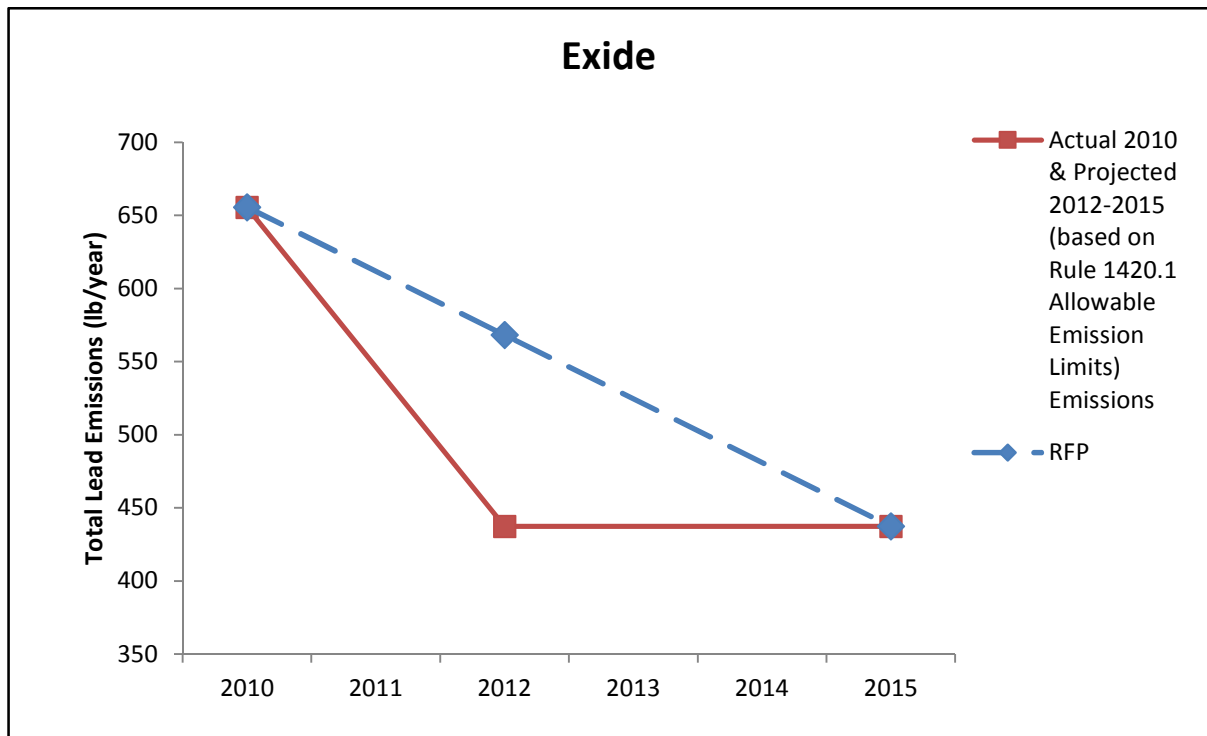
In addition, an approved and enforceable Compliance Plan with a trigger mechanism at Exide, and an existing additional control device at Quemetco, provide additional contingency measures that further satisfy CAA requirements

REASONABLE FURTHER PROGRESS (RFP)

The CAA requires SIPs for most nonattainment areas to demonstrate RFP toward attainment through emission reductions phased in from the time of the SIP submission out to the attainment date. The revised lead NAAQS provides further detail on how RFP is to be addressed in lead SIP submittals (73 FR 67038). Per CAA section 171, RFP is defined as “such annual incremental reductions in emissions of lead as are required by this part or may reasonably be required by the Administrator for the purposes of ensuring attainment of the lead NAAQS by December 31, 2015”. To determine RFP for lead, at a minimum, controls must be implemented expeditiously and an accurate estimate of emissions reductions that will be achieved by control measures should be quantified.

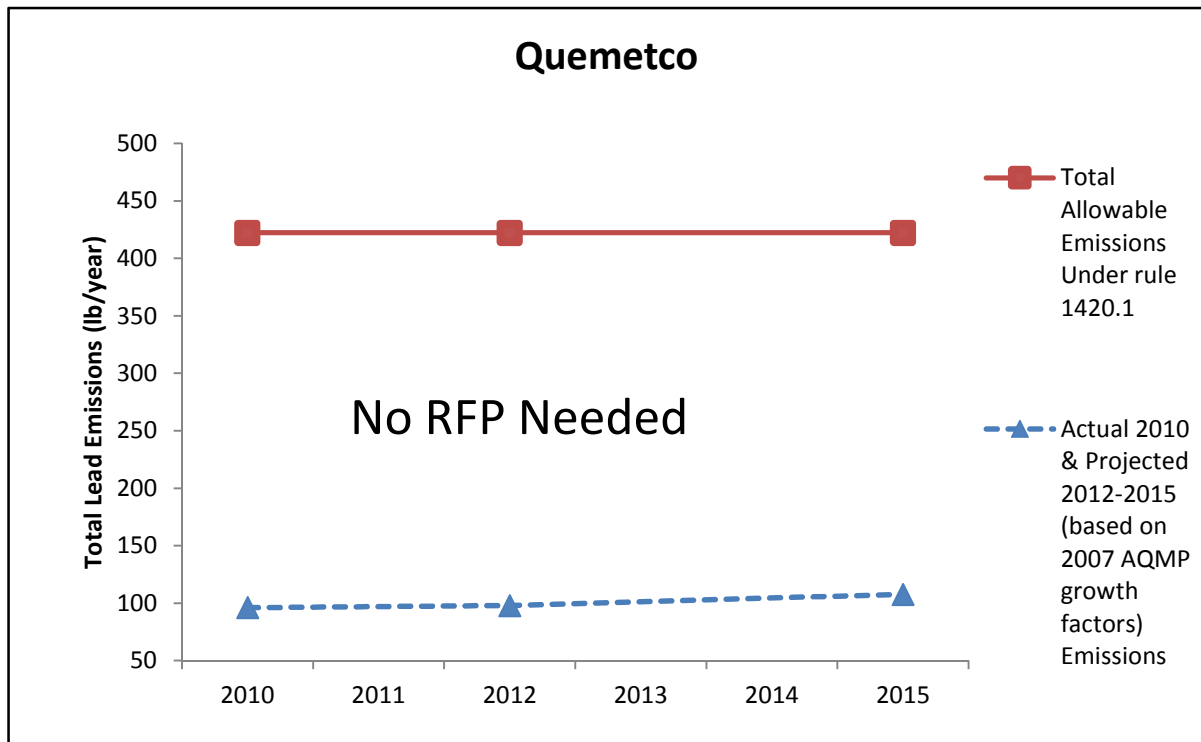
For Exide, in 2010, the actual total emissions were 655.54 lbs/yr. Since Rule 1420.1 is already adopted and all provisions in the rule leading to emissions reduction are already in effect, the emissions from Exide for 2012 are anticipated to be 437.41 lbs/yr, which is the total allowable emissions limit established in Rule 1420.1. The amount represents minimum emission reductions necessary for Exide to ensure attainment, and show compliance with Rule 1420.1 requirements. Since the compliance deadline for meeting Rule 1420.1 ambient limits is January 1, 2012, Exide’s emissions after 2012 should either decrease or stay the same. Therefore, as shown in Figure 6-2, RFP for Exide is demonstrated through the early achievement of the required emissions reductions mandated under Rule 1420.1.

Figure 6-2
Demonstration of RFP for Exide



For the Quemetco facility, in 2010, the actual total emissions were 96.21 lbs/yr, which is well below the allowable emission limit of 422.32 lbs/yr established in Rule 1420.1. Since Quemetco has already taken major steps in reducing lead emissions, as shown by their 2010 emissions, it is not anticipated that their emissions will increase to the total allowable limit. In order to estimate Quemetco's actual future emissions for RFP demonstration, the emission growth factor contained in the 2007 AQMP was applied to the actual baseline emissions in 2010, and as a result, 2012 and 2015 lead emissions are estimated to be 98.06 lbs/yr and 107.73 lbs/yr, respectively. These total emissions continue to be much less than the 422.32 lbs/yr allowable emission limit. Therefore, as shown in Figure 6-3, there is no need to demonstrate RFP for Quemetco since no additional emissions reductions are needed.

Figure 6-3
Demonstration of RFP for Quemetco



CAA Section 171 also states that RFP for lead nonattainment areas should be met by “adherence to an ambitious compliance schedule” which is expected to periodically yield significant emission reductions, and as appropriate, linear progress. The EPA recommends that SIPs for lead nonattainment areas provide a detailed schedule for compliance of RACM (including RACT) in the affected areas and accurately indicate the corresponding annual emission reductions to be achieved.

The “ambitious compliance schedule” requirement for RFP is already met since adopted Rule 1420.1 contained compliance deadlines of July 1, 2011 for implementation of all requisite control measures and emissions limits, and January 1, 2012 for the ambient monitoring limit of $0.15 \mu\text{g}/\text{m}^3$. Rule 1420.1 complies fully with RACM, and since Rule 1420.1 is already adopted, and all provisions in the rule leading to emissions reductions are already in effect, there is no need to further indicate annual incremental reductions or linear progress for RFP purposes. All emission reductions have already been achieved. The facilities are already subject to emission limits and ambient monitoring requirements that will ensure compliance with the NAAQS.

The CAA also requires early implementation of less technology intensive control measures (e.g. controlling fugitive dust emissions at the stationary source, as well as required controls on area sources), and phased in implementation of more technology intensive control measures, such as those involving the installation of new hardware. Rule 1420.1 outlines requirements for total enclosures of all areas which process, handle and store lead-containing

materials for the control of fugitive emissions, in addition to add-on controls such as the usage of filters or bags achieving 99.97% control efficiency on 0.3 micron particles, and secondary lead controls on dryers. Rule 1420.1 also includes additional provisions requiring detailed housekeeping, and periodic emissions testing of air pollution control devices. Failure to comply with these requirements will result in violations and associated further actions to bring the facility into compliance.